

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

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Patentanwälte
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Eing. 14. Nov. 2005
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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/EP2004/011568

International filing date (day/month/year)
14.10.2004

Priority date (day/month/year)
14.10.2003

International Patent Classification (IPC) or both national classification and IPC
H01M8/02, H01M8/10

Applicant
NUVERA FUEL CELLS EUROPE S.R.L.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2004/011568

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2004/011568

Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 1(partially),14

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☒ no international search report has been established for the whole application or for said claims Nos. 1(partially),14

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☒ See separate sheet for further details

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/EP2004/011568

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2-13
	No: Claims	1
Inventive step (IS)	Yes: Claims	2-13
	No: Claims	1
Industrial applicability (IA)	Yes: Claims	1-13
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item III.

Rule 6.2 (a) PCT

The application does not meet the requirements of Rule 6.2 (a) PCT because claim 14 refers to the figures. Therefore neither search nor examination has been performed regarding said claim 14.

Clarity - Article 6 PCT

The application does not meet the requirements of Article 6 PCT because claim 1 is not clear. Claim 1 does not meet the requirements of Article 6 PCT in that the matter for which protection is sought is not clearly defined. By using the wording "characterised in that the lateral migration of ions proceeding from said thermostating fluid inside said ion-exchange membranes is prevented", said claim 1 attempts to define the subject-matter in terms of the result to be achieved, which merely amounts to a statement of the underlying problem, without providing the technical features necessary for achieving this result.

Therefore the search has been carried out on a stack consisting of a filter-press modular arrangement comprising a multiplicity of single proton exchange membrane fuel cells and of cooling devices, each cell being delimited by a pair of metal bipolar plates and comprising ion-exchange membranes and perimetrical sealing gaskets shaped as frames suitable for housing current collectors within their hollow central part, the bipolar plates and the gaskets being provided with passage openings comprising holes for feeding the reactant gases, for extracting the residual gases with the reaction products, for injecting and discharging a thermostating fluid.

Therefore the examination has been restricted as well.

Re Item V.

Reference is made to the following documents:

D1 : EP 0 629 015 A (DE NORA PERMELEC S.P.A; NUVERA FUEL CELLS EUROPE S.R.L) 14 December 1994 (1994-12-14)

1. Novelty - Article 33(2) PCT

The present application does not meet the criteria of Article 33(1) PCT, because the

subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

Document D1 discloses (the references in parentheses applying to this document):

Stack consisting of a filter-press modular arrangement comprising a multiplicity of single proton exchange membrane fuel cells and of cooling devices, each cell being delimited by a pair of metal bipolar plates and comprising ion- exchange membranes and perimetrical sealing gaskets shaped as frames suitable for housing current collectors within their hollow central part, the bipolar plates and the gaskets being provided with passage openings comprising holes for feeding the reactant gases, for extracting the residual gases with the reaction products, for injecting and discharging a thermostating fluid (see page 5, lines 5-12, 43-47 and figures 1 and 4).

The combination of the features of claims 2 to 13 are neither known from, nor rendered obvious by, the available prior art. Therefore said claims meet the requirements of the PCT in respect of novelty and inventive step.

2. Industrial applicability - Article 33(4) PCT

The subject-matter of claims 2 to 13 is industrially applicable. Therefore said claims meet the requirements of Article 33(4) PCT.

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